

REMARKS

The application has been reviewed in light of the final Office Action dated October 2, 2008. Claims 1, 12, 23 and 34-43 were pending, with claims 2-11, 13-22, 24-33 and 44-47 having previously been canceled, without prejudice or disclaimer. By this Amendment, claim 40 has been canceled, without prejudice or disclaimer, and claims 1, 12, 23 and 34 have been amended to clarify the claimed subject matter. Accordingly, claims 1, 12, 23, 34-39, and 41-43 remain pending upon entry of this amendment, with claims 1, 12, 23 and 34 being in independent form.

Claims 1, 12, 23, 34-37 and 40-42 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Rylander (WO 93/20648) in view of Ohkubo (US 2002/0163659 A1). Claim 38 was rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Rylander in view of Ohkubo and further in view of Akira (JP 2001-358938). Claims 39 and 43 were rejected under 35 U.S.C. § 103(a) as purportedly unpatentable over Rylander in view of Ohkubo and further in view of U.S. Patent No. 4,929,978 to Kanamori et al.

Applicant submits that the present application is allowable over the cited art, for at least the reason that the cited art does not disclose or suggest the aspect of the present application that using a selected color profile to convert color data input in an RGB color space to converted color data in a CMYK color space, the color profile having been generated by obtaining relationships between image forming apparatuses producing color patch data generated from *uniformly dividing* a RGB color space. Such aspect of the present application enables efficient use of memory and calculation resources. Each of independent claims 1, 12, 23 and 34 addresses such aspects, as well as additional features.

Rylander, as understood by Applicant, proposes generating a four-dimensional, YMCK-

to-YMCK, look-up table for correcting image data printed on a second printer to have the same color characteristics of that image data when printed on a first printer.

Rylander, contrary to the contention in the Office Action, does not disclose or suggest using a selected color profile to convert color data input in an RGB color space to converted color data in a CMYK color space, the color profile having been generated by obtaining relationships between image forming apparatuses producing color patch data generated from *uniformly dividing* a RGB color space.

Indeed, Rylander (page 1, lines 22-30) teaches away from performing color correction process while converting from an RGB color space to a YMCK color space. Instead, Rylander (column 1, lines 7-8) proposes “converting a first set of color image data which has *already been corrected* for use with a first specific printer into a second set of data”.

Further, Rylander teaches away from generating a color profile by obtaining relationships between image forming apparatuses producing color patch data generated from uniformly dividing an RGB color space. Conversely, Rylander (column 4, lines 21-22) teaches “the samplings of steps a and b (color test pattern generation and measuring steps) *are preferably nonuniform*, emphasizing the more visually important regions of color space”.

As the United States Supreme Court recently reiterated in the KSR case, such teaching away is relevant evidence of nonobviousness and cannot be ignored.

Ohkubo, as understood by Applicant, proposes a method for creating a color profile for defining a coordinate conversion between an RGB color space of one device to an RGB color space of another device by measuring and comparing calorimetric values of color patches output by each of the devices. Ohkuubu teaches that the method proposed therein may be used when “the color spaces for the devices are CMY spaces, CMYK spaces or other spaces” (Ohkubo,

[0137]). Thus, Ohkubo teaches that the method proposed therein is only acceptable for use when the devices are *all* either RGB, CMY, CMYK, etc.

Ohkubo does not disclose or suggest that the method proposed therein is applicable for converting between an RGB color space and a device-dependent CMYK color space.

Ohkubo, like the other cited references, does not disclose or suggest the aspect of the present application of using a selected color profile to convert color data input in an RGB color space to converted color data in a CMYK color space, the color profile having been generated by obtaining relationships between image forming apparatuses producing color patch data generated from *uniformly dividing* a RGB color space.

Paragraphs [0026], [0126] and [0129] of Ohkubo, which were cited in the Office Action, are reproduced below:

[0026] According to the first, second and third color conversion definition creating method of the present invention as mentioned above, a color conversion definition is created via a reference color representation area (a color representation area of the reference device) "close" to a color representation area of the arbitrary device. Thus, preparation of minor suitable reference color representation area (a color representation area of the reference device) makes it possible to readily create a high quality of color conversion definition according to a various type of arbitrary device.

...

[0126] Thereafter, in the creating step 900, first, the arbitrary printer 910 outputs a color chart 920, and a calorimeter 930 measures colors of color patches constituting the color chart 920 to obtain calorimetric values Lab. Assembly of the calorimetric values Lab represents a color representation area of the arbitrary printer 910. Further, in the creating step 900, there is obtained image data RGB for the arbitrary printer 910. Those calorimetric values Lab are associated with image data RGB, so that there are created a color profile 940 defining a coordinate conversion between the calorimetric space and the RGB space for the arbitrary printer 910.

...

[0129] Finally, in a profile combination process 952 of the first embodiment 950, the color profile 915 created in the profile creating process 880 in the previous step 800 is simply combined with the color profile 960 created in the profile creating process 951 in the creating step 900, so that there is created a *color profile 970 defining a coordinate conversion between the RGB space for the CRT display 810 and the RGB space for the arbitrary printer 910*. Both the color profiles 915 and

960, that are the base for the color profile 970, represent the coordinate conversion maintaining the natural impression for an image. Accordingly, the color profile 970 also represents the coordinate conversion maintaining the natural impression for an image. The color profile 970 functionally incorporates therein the color conversion definition LUT0 shown in FIG. 4.

Thus, Ohkubo proposes an approach for creating a color profile defining a coordinate conversion between the RGB space for the CRT display 810 and the RGB space for the arbitrary printer 910.

However, Ohkubo, contrary to the contention in the Office Action, does not disclose or suggest the aspect of calculating a coordinate value in the second color space which depends on the apparatus type of the *second printer* for each color patch whereby color of an image formed by the second printer has a color difference which is effectively reduced from color of an image formed by the *first printer*, according to the relationship between the predetermined device-independent color space in an image formed by the second printer and the second color space which depends on the apparatus type of the second printer.

Akira, as understood by Applicant, proposes a method for detecting a specified pattern, such as a pattern found on currencies, in image data sent to a printer through a printer driver. The proposed printer driver includes, among other elements, a color matching component 1320 which inputs RGB data and outputs correspondence $R'G'B'$ data given by a profile. (paragraph [0019]).

However, Akira does not disclose or suggest using a color profile to convert color data input in an RGB color space to converted color data in a CMYK color space. Likewise, Akira also does not disclose or suggest that the color profile is generated by obtaining relationships between image forming apparatuses producing color patch data generated from uniformly dividing an RGB color space.

Kanamori, as understood by applicant, proposes an approach for performing color correction of a digital color copier wherein a set of color patches using a set of CMYK printing data values, the color patches are then scanned and analyzed by the color copier to obtain RGB color patch input data values, each of the possible input color data values that can be produced by the scanner/analyizer section of the color copier is then related to one of the RGB color patch input data values which is closest thereto in a 3-dimensional color space, and each of these possible input color data values is thereby related to an appropriate CMYK color printing value to generate a color correction table that can be used to perform conversion of RGB data to CMY data for printing using *that same copier*.

While the approach proposed by Kanamori involves converting RGB input color data values to corresponding CMYK color printing values, Kanamori does not disclose or suggest producing, in a computer, color patch data from uniformly dividing an RGB color space. Conversely, the color patches proposed by Kanamori, shown by Figures 4 and 5 therein, do *not* uniformly divide a color space.

Applicant submits that the cited art, even when considered along with common sense and common knowledge to one skilled in the art, does *NOT* render unpatentable the above-mentioned aspect of the present application.

Accordingly, Applicant respectfully submits that independent claims 1, 12, 23 and 34, and the claims depending therefrom, are patentable over the cited art.

In view of the remarks hereinabove, applicant submits that the application is now in condition for allowance. Accordingly, applicant earnestly solicits the allowance of the application.

If a petition for an extension of time is required to make this response timely, this paper

should be considered to be such a petition. The Patent Office is hereby authorized to charge any fees that are required in connection with this amendment and to credit any overpayment to our Deposit Account No. 03-3125.

If a telephone interview could advance the prosecution of this application, the Examiner is respectfully requested to call the undersigned attorney.

Respectfully submitted,



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